EXHIBIT A

DECLARATION OF SCOTT H. HOLMBERG

I, Scott Holmberg, declare under penalty of perjury as follows:

1. I am submitting this declaration in rebuttal to the claim constructions proposed by defendants and in rebuttal to the declaration submitted by defendants regarding U.S. Patent No. 5,019,002 (herein "the '002 patent").

2. I have personal knowledge of the facts stated in this declaration, and if called upon as a witness, I could competently testify to the facts stated herein.

3. I am a resident of the state of California, residing at 3106 Las Palmas Avenue, Escondido, CA 92025.

4. I received a Bachelor of Science in the field of Electrical Engineering from Wayne State University, and have received training in SPC, ISO-9000, BPR and numerous technical topics.

5. I have over thirty (30) years of engineering and management experience in the semiconductor and electronic display industry, including the design and development of one of the world's first fully functional Active Matrix Liquid Crystal Displays (AMLCD) in 1982.

6. I have authored numerous publications; and am a named inventor on twenty-one (21) issued patents. More detailed information about my background, experience and achievements can be found in my resume which is attached as *Exhibit 1*.

7. Given my background, experience, knowledge and education, I am regarded as an expert in process development, facility planning, device characterization and engineering operations.

8. I am the inventor of the '002 Patent, entitled "Method of Manufacturing Flat Panel Backplanes Including Electrostatic Discharge Prevention and Displays Made Thereby," which relates to the protection of the circuit elements of liquid crystal display panels (LCD panels) from damage caused by electrostatic discharge. I have reviewed the parties' proposed constructions of the disputed terms of the '002 Patent.

9. During the manufacture of the LCD panel, electrostatic discharge can occur when a high static electric potential is coupled across at least one pair of row and column lines. Electrostatic discharge is undesirable because it generally causes a short, and thus damaging the pixel. When this occurs, the LCD panel manufacturer may be unable to use the entire backplane of the active matrix display. The high occurrence of unusable product in turn causes the manufacturer to suffer an increased manufacturing cost.

10. To protect the device from electrostatic discharge during manufacture, the '002 Patent discloses a technique that employs electrostatic discharge guard rings around the active elements of the display. To protect the matrix from electrostatic discharge, the manufacturing technique of the '002 Patent employs an outer electrostatic discharge guard ring, which is connected to the row and column lines. Furthermore, because the outer electrostatic discharge guard ring is not necessary after manufacturing, the outer electrostatic discharge guard ring is positioned outside of the active matrix display and in particular around the contact pads of the row and column lines. In this manner, after manufacture is completed, the outer electrostatic discharge guard ring can be easily removed.

11. The '002 Patent also discloses an inner electrostatic discharge guard ring located inside the outer electrostatic discharge guard ring to also serve to protect against electrostatic discharge.

12. In the context of the '002 Patent, "outer electrostatic discharge guard ring" does not mean "a ring of conductor, located external to the inner electrostatic discharge guard ring if the two rings are used together, for draining off electrostatic buildup to prevent electrostatic discharge" as Defendants contend.

13. The "outer" location of the electrostatic discharge guard ring is with reference to the active matrix and not to the inner guard ring. Accordingly, it is incorrect to define the location of the outer electrostatic discharge guard ring referencing an inner electrostatic discharge guard ring.

14. Additionally, the electrostatic discharge guard ring does not "prevent electrostatic discharges" from occurring as contended by the Defendants. There are various sources of electrostatic discharge during the manufacturing process. For example, the electrostatic discharge may be caused by contact with a charged source, or it may accumulate during a plasma process or a drying process. Rather than preventing the electrostatic discharge, the guard ring protects the circuit from the electrostatic discharge which inevitably occurs during manufacturing. Moreover, as explained below, the ordinary meaning of "electrostatic discharges" is not limited to charge buildup, and it is erroneous to limit the electrostatic discharge guard ring to only "draining off electrostatic buildup."

15. The proper definition for "outer electrostatic discharge guard ring" is "a closed or open ring, or open L or C-shaped line, outside the active matrix display to

provide protection from electrostatic discharges." This definition more accurately describes the location and function of the outer electrostatic discharge guard ring. Additionally, this definition properly describes that the "ring" may be a closed or open L or C-shaped line, a feature that the Defendants excluded from their definition.

16. The term "electrostatic discharges" does not mean "a flow of electrical current caused by a buildup of static electrical charges" as defined by the Defendants. There are various causes of electrostatic discharge. In some instances, the electrostatic discharge accumulates during a manufacturing process. For example, during a plasma process, charges accumulate to form a voltage differential resulting in an electrostatic discharge. Additionally, however, "electrostatic discharges" can be induced by a charged body touching the device or by other charges that are suddenly transferred to the circuit. Accordingly, the proper construction for "electrostatic discharges" is "a release of current resulting from a voltage differential caused by static electricity."

17. In the context of the '002 Patent, "inner electrostatic discharge guard ring" does not mean "a ring of conductor, located internal to the outer electrostatic discharge guard ring if the two rings are used together, for draining off electrostatic buildup to prevent electrostatic discharges," as Defendants contend. This definition is erroneous for the same reasons discussed above with respect to "outer electrostatic discharge guard ring." Defendants incorrectly construe the inner electrostatic discharge guard ring as preventing electrostatic discharges. Instead, the inner electrostatic discharge guard ring protects the circuit from electrostatic discharges. By Defendants' definition, the function of the inner electrostatic discharge guard ring is limited to "electrostatic buildup," which

is not the only source of electrostatic discharge. Therefore, the Defendants' definition is unduly limiting.

18. Thus, "inner electrostatic discharge guard ring" should be "a closed or open ring, or open L or C-shaped line, inside the outer guard ring to provide protection from electrostatic discharges."

19. In the context of the '002 Patent, "interconnecting" does not mean "electrically connecting with conductors," as Defendants contend. This term is more properly defined as "shorting." Defendants' definition is unduly limited to using conductors. However, the interconnecting may also be accomplished using semiconductive material. For example, a device such as a transistor or a resistance may be the "interconnecting" elements. Accordingly, "shorting," which is not unduly limited to the use of conductors, is a more accurate definition for the term "interconnecting."

20. Defendants construe "interconnecting substantially all of said row lines to one another" to mean "electrically connecting with conductors all, or nearly all, of row lines to one another"; and separately construe "interconnecting . . . substantially all of said column lines to one another" to mean "electrically connecting with conductors all, or nearly all, of column lines to one another." This construction is improper. With their definitions, Defendants require electrically connecting "all, or nearly all" of the row and column lines. However, it is possible to protect the circuit from electrostatic discharge even by interconnecting some of the rows and some of the columns. Accordingly, the phrase should not be limited to "all, or nearly all." A more appropriate definition is "sufficiently interconnecting said row lines to one another and said columns lines to one another to provide protection from electrostatic discharge."

21. In the context of the '002 Patent, the phrase "coupled to said interconnected row and column lines via a resistance" is clear to one of ordinary skill in the art. This phrase does not mean "linked through one or more resistors to the interconnected column lines and to the interconnected row lines," as Defendants contend. This phrase is clear on its face and should not be limited to mean independently connecting the row and column lines to the electrostatic discharge ring. Since "coupled" means "electrically connected," the proper definition should be "electrically connected to said interconnected row and column lines via a resistance" without limiting the manner in which the column and row lines are connected to the outer electrostatic discharge guard ring.

22. Additionally, Defendants' interpretation of "resistance" attempts to improperly equate "resistance" with "resistor." Specifically, Defendants construe resistance as:

> "A resistance, as it is used in the claims, means a resistor, which is a circuit element that has a specified resistance to the flow of electrical current. A resistance does not include switching elements such as transistors and diodes."

This definition is erroneously limiting. It is well understood that many elements have resistances including active elements such as transistors and diodes. Such active elements are often used to specifically provide resistance, in which the resistance is controlled with a gate potential. It is improper to state that only a "resistor" is the source of a resistance. Accordingly, as used in the '002 Patent, the term "resistance" is more properly defined as "any component used to cause a voltage drop during current flow."

23. In context of the '002 Patent, the meaning of the phrase "removing said outer guard ring and row and column interconnections" is clear to one of ordinary skill in the art. It is inappropriate to interpret this phrase to mean "electrically disconnecting the interconnections between rows and between columns, and electrically disconnecting row and column lines from the outer guard ring," as Defendants contend. Removal of the outer electrostatic discharge guard ring means the actual physical disconnection of the outer electrostatic discharge guard ring. Defendants are improperly defining the term "removing" to mean "electrically disconnecting." However, one of ordinary skill in the art understands removing to mean physically disconnecting. As such, the proper definition of "removing said outer guard ring and row and column interconnections" is physically disconnecting said outer electrostatic discharge guard ring and row and column interconnections.

24. In the context of the '002 Patent, "pickup pad" does not mean "a pad located at the corner region of a backplane for aligning the frontplane and backplane," as Defendants contend. This definition is incorrect because the "pickup pad" is not used for aligning the frontplane and backplane. In the '002 Patent, the frontplane and backplane are aligned using "corner 218." The pickup pad, however, is a "conductive area used to electrically connect the backplane to the frontplane."

25. In the context of the '002 Patent, a "shunt switching element" does not mean "a device that is capable of switching between on and off states (e.g., a transistor or diode) to open or close a by-pass for diverting electrical current," as Defendants contend. This definition is unduly limiting and improper. One of ordinary skill in the art would define this term as a "parallel switching device."

26. In the context of the '002 Patent, the meaning of the term "corner pad" is clear to one of ordinary skill in the art. This term does not mean "a pad of metal or other conductive materials that is located at the corner of an outer guard ring, and electrically connected with the outer ring," as Defendants contend. Although the "corner pad" *can* be grounded, it does provide the alignment for the scribe lines. Thus, "corner pad" is interpreted to mean "a reference mark for cutting," and may or may not be grounded.

27. The meaning of the term "scribe line" is clear to one of ordinary skill in the art. It does not mean "a predefined line along which the glass substrate can be marked with a sharp tool either to disconnect the conductor patterns along the line or to initiate the fracture of the glass substrate along the line," as Defendants contend. As discussed previously, the outer electrostatic discharge guard ring is physically disconnected. Use of a scribe line is generally employed to ultimately cut and physically disconnect a portion of the substrate. Accordingly, it is improper to construe the term "scribe line" as something that merely disconnects conductor patterns. Instead, a proper interpretation for the term "scribe line" is a "cutting line based on reference marks."

28. In the context of the '002 Patent, the phrase "aligning scribe lines with said corner pad for removing said outer guard ring and row and column intersections" is clear to one of ordinary skill in the art. It does not mean "aligning each scribe line with one edge of the corner pad for disconnecting the outer guard ring and the row and column interconnections," as Defendants contend. As discussed above, the scribe line is used to cut a portion of the substrate so that the outer electrostatic discharge guard ring is physically disconnected. Additionally, Defendants' definition is improper for interpreting "corner pad" as "one edge of the corner pad." There is no basis for this

interpretation. Moreover, Defendants have not interpreted the term aligning. A proper definition for "aligning" is "adjusting."

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed on MARCH 15, 2006 at ESCONDIDO, CALIFORNIA.

Scott H. Holmberg

Scott H. Holmberg

EXHIBIT 1

Scott H. Holmberg

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Highlights of Qualifications

- Over 30 years of Management and Engineering experience in the semiconductor and electronic display industry ranging from start-ups to established companies
- International marketing and business skills with full P&L responsibility
- Designed and developed one of the world's first fully functional Active Matrix Liquid Displays (AMLCD) in 1982
- Oversaw the staffing, design, construction, equipment setup and operation of two AMLCD facilities in Fremont, CA
- Proven capability in implementing productivity enhancement tools (TQM, SPC & DOE) and ISO 9001 Programs
- Perceived and implemented success oriented training programs and Incentive Stock Option Plans (ISOP) for employees which lowered the turnover to less than 3% per year
- Established cost savings techniques to increase profitability

Professional Experience

LightSmith, Inc., Escondido, CA 1997-Present
President and CEO

Conceptualized, demonstrated proof of concept and patented a number of approaches for fabricating poly-silicon active circuits on plastic substrates. Patented a unique system design for dry etching Indium-Tin-Oxide (ITO) on glass or plastic substrates. Provided Business and Technical consulting for a number of multi-national companies in the areas of Transmissive MicroDisplays, AMLCD's, Field Emission Display (FED) technology and digital X-ray sensors.

Achievements

- Invented and filed a portfolio of patents relating to fabricating active circuits on plastic substrates and equipment to dry etch ITO films
- Assisted in the business planning and technical development of a SVGA MicroDisplay for a start-up company
- Made significant contributions in the analysis and understanding of failure modes and instabilities in FED's
- Developed a complete 10 year business plan for the development and production of X-ray sensors for the medical and industrial marketplace
- Conceptualized and implemented a cost model and production plan for a 19" high volume AMLCD manufacturing facility utilizing generation 3.5 substrates

Image Quest Technologies, Inc., Fremont, CA 1992-1997
President and CEO

Founded Image Quest Technologies, Inc. in 1992 and secured a $22 million equity and development contract from Hyundai Electronics for the development of Active Matrix Liquid Crystal Displays (AMLCDs) for commercial, military and avionics applications. Oversaw all startup activities including staffing, site selection for company, design of clean rooms and support equipment, writing purchase and acceptance specifications for $12 million of development and production capital equipment. Responsible for all profit and loss aspects of business operations including R&D, engineering, manufacturing, sales, marketing and finance.

Achievements

- Successfully developed two high performance AMLCD products for military and avionics applications
- Secured over $10 million in backlog orders prior to product introduction
- Trained over 60 Hyundai engineers in AMLCD technology and aided them in successfully starting up a $600 million AMLCD facility in Korea
- Initiated a Total Quality Management (TQM) and ISO 9001 program for the company which increased employee awareness and pride
- Implemented success oriented training programs for all employees, which increase morale and reduced employee turnover to less than 3% per year — lowest of the Hyundai subsidiary companies
- Trained employees on productivity enhancement tools such as Statistical Process Control (SPC) and Design of

Experiments (DOE) which helped employees monitor the fabrication process and increase yield

Advanced Display Technologists, Pleasanton, CA 1991-1992
Founder and Senior Consultant

Founded the consulting group in 1991 to provide services related to the semiconductor and display industries.

Achievements
- Invented and documented a new high yielding AMLCD process based on Amorphous Silicon Thin Film Transistors
- Developed business plans and cost models for the development and production of AMLCD's

Coloray Display Corporation, Fremont, CA 1989-1991
Vice President, Semiconductor and Process Development

Co-founder of Coloray Display Corporation, which was founded to develop and manufacture Field Emission Displays (FED's) — a new vacuum microelectronic display technology. Primary responsibilities were in the area of process development of the Field Emitter substrate.

Achievements
- Invented and patented a number of new concepts relating to process improvements of FED's
- Developed the corporate technology plans and production cost models for FED's
- Successfully demonstrated the operation of Field Emission Array's (FEA's) on glass substrates

Alphasil, Inc., Fremont, CA 1982-1989
Senior Vice President of Operations

Co-founded the company in 1982 to develop and manufacture AMLCD's for commercial, military and commercial applications. Primary responsibilities were in the area of Operations, which included technology development, and manufacturing.

Achievements
- Successfully designed and developed one of the world's first fully functional 3" diagonal AMLCD's in 1982 utilizing rented equipment and facilities
- Initiated the company's intellectual property program, which included filing of patents and developing a trade secrets policy
- Aided in writing a business plan and subsequent negotiations, which culminated in a $7.5 million agreement with Sperry Corporation to develop and manufacture AMLCD's for military and avionics applications
- Selected and negotiated $4 million worth of AMLCD manufacturing equipment
- Hired a critical management team with backgrounds in semiconductor, liquid crystal and systems design, and integrated their talents to develop AMLCD's
- Designed and managed the engineering and construction of 6,000 square feet of class 100 clean rooms in the Fremont facility for development and production of AMLCD's — the first of its kind in North America (1987)
- Initiated the design and development of a 640 x 400 pixel AMLCD panel utilizing amorphous silicon thin film transistors. Established cumulative production yields of 45% on the active matrix glass utilizing patented processing techniques and redundancy schemes
- Designed and fabricated the company's first color (6.4"diagonal) AMLCD in 1988, and completed the development of 5 custom monochrome displays for military and avionics applications

Energy Conversion Devices, Inc., Troy, MI 1979-1982
Senior Staff Engineer

Recruited back from Burroughs Corporation to continue the development of the ECD Ovonic Memory Switch (OMS), Ovonic Threshold Switch (OTS) and other semiconductor related technologies. Responsibilities included staffing, product conception and development, and technology transfer to licensees for manufacture.

Achievements

- Invented and supervised the development of a high-density vertical anti-fuse PROM device made from amorphous materials
- Successfully supervised personnel at various semiconductor manufacturers to demonstrate the manufacturability and reliability of vertical PROM devices
- Designed and developed thin film transistors and diodes made from amorphous materials
- Filed numerous patents on device structures utilizing amorphous materials
- Assisted management in successful negotiations with technology licensees

Burroughs Corporation, San Diego, CA 1975-1979
Project Engineer

Transferred from Energy Conversion devices to Burroughs Corporation in 1975 to integrate the Ovonic Memory Switch (OMS) with Burroughs bipolar current mode logic technology. Primary responsibilities were in the area of test, failure analysis and device development.

Achievements

- Successfully completed the development, test procedure and reliability testing which led to product qualification and product delivery to customers
- Developed and patented a new Electrically Alterable Read Only Memory (EAROM) device which solved infant mortality and lifetime problems
- Promoted to Project Manager for PROM and EAROM products which included overseeing Engineering, Manufacturing and testing of all PROM and EAROM products

Energy Conversion Devices, Inc., Troy, MI 1968-1975
Technician/Project Engineer

Hired as a research technician to perform early scientific work and material science involving amorphous materials.

Achievements

- Completed a college engineering degree at Wayne State University during evening sessions while working full time at ECD
- Supervised the design and layout of a 1024 bit EAROM integrated memory chip after graduation. Responsibilities include assuring compatibility between layout, circuit design and amorphous and single crystalline manufacturing process
- Established testing and reliability procedures for amorphous memory devices

Bendix Research Laboratory, Southfield, MI 1966-1968
Research Technician

Performed experiments on optical and electronic effects in crystalline solids and aided in the analysis and interpretation of the experimental results.

U.S. Coast Guard 1962-1966
Electronics Technician (ET-1)

Professional Affiliations

Society for Information Display (SID)
The International Society for Optical Engineering (SPIE)

Education

Wayne State University, Detroit, Michigan, B.S.E.E.

Patents

Twenty-one Issued Patents
One Patent Pending

List of Issued Patents

	Pat. No.	Title
1	6,613,650	Active matrix ESD protection and testing scheme
2	6,160,270	Performance matrix, method of making an active matrix displays incorporating an improved TFT
3	6,066,506	TFT, method of making and matrix displays incorporating the TFT
4	5,954,559	Color filter structure and method of making
5	5,874,746	TFT, method of making and matrix displays incorporating the TFT
6	5,737,041	TFT, method of making and matrix displays incorporating the TFT
7	5,731,216	Method of making an active matrix display incorporating an improved TFT
8	5,668,032	Active matrix ESD protection and testing scheme
9	5,162,931	Method of manufacturing flat panel backplanes including redundant gate lines and displays made thereby
10	5,123,847	Method of manufacturing flat panel backplanes, display transistors
11	5,075,591	Matrix addressing arrangement for a flat panel display with field emission cathodes
12	5,019,002	Method of manufacturing flat panel backplanes including electrostatic discharge prevention and displays made thereby
13	4,842,378	Method of illuminating flat panel displays to provide CRT appearing displays
14	4,820,222	Method of manufacturing flat panel backplanes including improved testing and yields thereof and displays made thereby
15	4,736,229	Method of manufacturing flat panel backplanes, display transistors and displays made thereby
16	4,651,185	Method of manufacturing thin film transistors and transistors made thereby
17	4,599,705	Programmable cell for use in programmable electronic arrays
18	4,545,112	Method of manufacturing thin film transistors and transistors made thereby
19	4,531,144	Aluminum-refractory metal interconnect with anodized periphery
20	4,499,557	Programmable cell for use in programmable electronic arrays
21	4,177,475	High temperature amorphous memory device for an electrically alterable read-only memory

Publications and Presentations

"Temperature and Pressure Dependence of the Optical and Electrical Gap in Chalcogenide Glasses". E.A. Fagen, S.H. Holmberg, R.W. Seguin, and J.C. Thompson, Proc 10th Int. Conf. Phys. Semicon.

"A Model for Photoconductivity in Amorphous Chalcogenide Alloys". T.C. Arnoldussen, R.H. Bube, E.A. Fagan, and S.H. Holmberg, J. Non-Cryst. Solids 8-10, 933 (1972).

"Analysis of Photoconductivity in Amorphous Chalcogenides". T.C. Arnoldussen, R.H. Bube, E.A. Fagan, and S.H. Holmberg, J. Appl. Phys. 43, 1798 (1972).

"New Thin Film Tunnel Triode Using Amorphous Semiconductors". R.F. Shaw, H. Fritzsche, M. Silver, P. Smejtek, S.H. Holmberg and S.R. Ovshinsky, Appl. Phus. Lett. 20, 214 (1972).

"Nanosecond Switching in Thin Amorphous Chalcogenide films". S.H. Holmberg and M.P. Shaw, Proc. 5th Int. Conf. on Amorphous and Liquid Semicon. (1973).

"Reversible Switching in Thin Amorphous Chalcogenide Films — Electronic Effects". M.P. Shaw, S.H. Holmberg and S.A. Kostylev, Phys. Rev. Lett. 31, 542 (1973).

"Evidence for Critical Field Switching in Amorphous Semiconductor Materials". W.D. Buckley and S.H. Holmberg, Phys. Rev. Lett. 32, 1429 (1974).

"Electrical Characteristics and Threshold Switching in Amorphous Semiconductors". W.D. Buckley and S.H. Holmberg, Sol. State Elec. 18, 127 (1975).

"Chalcogenide Memory Materials". Scott H. Holmberg, R.R. Shanks and V.A. Bluhm, J. Elec. Mater. 8, 333 (1979).

"Active Matrix Liquid Displays Using Amorphous Silicon Thin Film Transistors". R.A. Flasck and S.H. Holmberg, IEEE Computer Graphics and Applications, Vol 4, 19-22 (1984).

"Amorphous Silicon Thin Film Transistors (TFT) Driven Liquid Crystal Displays (LCD)". R.A. Flasck and S.H. Holmberg, Advances in Display Technology V, Elliott Schlam, Editor; Proceedings of SPIE, Vol 526, 94-98 (1985).

Unpublished Presentations

"Amorphous Device Memories Based on the Ovonic Memory Switch". S.H. Holmberg, IEEE NVSM Workshop, (1979).

"Nanosecond Switching Characteristics of Ovonic Threshold and Memory Switches". S.H. Holmberg, Workshop on Threshold Switching, (1980).

"A U.S. Supplier of Active Matrix Liquid Displays". Scott H. Holmberg, Electronic Buyers News Forum on Flat Panel Displays, (1993)

"An Overview of the Flat Panel Display Industry". Scott H. Holmberg, SEMI SMECS Program, (1994)